

COLTER CHANNEL AT EL MIRAGE ROAD
FCD GAGE ID #5408

STATION DESCRIPTION

LOCATION – The gaging station is located on the east side of El Mirage Road and approximately 1/4 mile north of Camelback Road. Latitude N 33° 30' 41.2", Longitude W 112° 19' 25.6". Located in the SW1/4 NW1/4 SW1/4 S13 T2N R1W in the El Mirage 7.5-minute quadrangle.

ESTABLISHMENT – The gage was established on June 29, 1994.

DRAINAGE AREA – Approximately 3.48 mi²

GAGE – The gage is a pressure transducer type instrument. The PT is at gage height 0.10 feet gage height, levels of December 9, 1996.

There is one painted staff gage at this location. It is located on the north bank downstream side of bridge. It reads in gage height.

There is one crest gage at this location. The pin elevation is 0.25 feet gage height, levels of November 9, 1998.

ZERO GAGE HEIGHT – Zero gage height is defined as 0.0 on the staff gage and is also the low point in the channel.

HISTORY – No previous history at this site prior to gage installation. Channel is man-made and no channel existed at this location before construction. Slope-area survey markers were installed on December 9, 1996. A crest gage was installed on February 11, 1997.

REFERENCE MARKS –

RM1 is a brass tablet on top of the concrete walkway divider at the southeast corner of the bridge. Elevation 11.60 feet gage height, levels of December 9, 1996.

There are monumented cross sections downstream from the bridge. Cross sections three through five are for slope area use.

X1L is located on the edge of the concrete on the left bank at the downstream side of the bridge. Elevation 7.06 feet gage height, levels of December 9, 1996. Cross section one is at the downstream side of the bridge.

X2L is located on the left edge and downstream corner of the concrete apron. It is 64 feet from X1R with an angle of 241 degrees 25 minutes to X1L. It is also 248 feet from X3L with an angle of 83 degrees 10 minutes to X3L. It is the left bank end of cross section two. Elevation 6.13 feet gage height, levels of December 9, 1996. Cross section two is at the downstream edge of the concrete apron and an angle of 180 degrees 45 minutes from X2L.

X3L is located 248 feet from X2L with angle of 263 degrees 10 minutes to X2L. It is also 300 feet west of X4L at an angle of 89 degrees 45 minutes to X4L. Elevation 3.80 feet gage height, levels of December 9, 1996. Cross section three is at an angle of 180 degrees 30 minutes from X3L.

X4L is located 300 feet east from X3L with an angle of 269 degrees 45 minutes to X3L. It is also 300 feet west of X5L at an angle of 90 degrees 0 minutes to X5L. Elevation 3.08 feet gage height, levels of December 9, 1996. Cross section four is at an angle of 180 degrees 00 minutes from X4L.

X5L is located 300 feet east from X4L with an angle of 270 degrees 00 minutes to X4L. Elevation 2.66 feet gage height, levels of December 9, 1996. Cross section five is at an angle of 180 degrees 00 minutes from X5L.

CHANNEL AND CONTROL – The channel is an earthen lined man-made engineered channel. The shape is trapezoidal. The control for all gage heights is the channel. There is no control at low stages.

RATING – The current rating is Rating #1 developed by T. M. Donaldson using surveyed cross sections in an HEC-2 step-backwater model.

DISCHARGE MEASUREMENTS – Direct measurements could be made by wading for shallow depths or from the bridge for higher flows. Indirect measurements could be made using the surveyed slope area cross sections.

POINT OF ZERO FLOW – The concrete floor at the gage is at gage height 0.00 feet.

FLOODS – None of any significance

REGULATION – None known

DIVERSIONS – None known

ACCURACY – Fair to good

JUSTIFICATION – Monitor flows in Colter Channel inputs to the Agua Fria River.

UPDATE – July 14, 2011
D. E. Gardner